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# Future functionality required from an online submission system for student work

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## Information Sheet

This working paper was written by members of the e-learning community at the University of Bath. If you'd like to access other working papers, presentations or posters given by the e-learning team at the University of Bath then see our Online Publications Store, <http://opus.bath.ac.uk/view/divisions/elearning.html>.

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## Introduction

As part of an ongoing e-Assessment Review (<http://blogs.bath.ac.uk/eassessreview/>), staff and student opinions have been sought on the future functionality that may be required from an online submission system for student work. Use of Moodle to upload assignments has almost doubled over the last academic year (<http://go.bath.ac.uk/lz3l>) and a growing interest in resources recently developed by the e-Learning team to support online submission of work (<http://go.bath.ac.uk/yfiy>) suggests that this trend is likely to continue in the future.

This report sets out functionality that may be required in the future from online submission of work, as requested by University of Bath Moodle users. It forms a basis for discussions to establish user priorities and will feed into conversations around ongoing and potential developments by the e-Learning Team and the wider Bath community. The findings in this working paper will be used both to assess whether the Moodle Assignment Activity will be fit-for-purpose for online submission in the long-term and to plan any requirements for future development of Moodle.

The requested functionality detailed in this report will contribute to:

- the Moodle Development Plan for 2011
- implementation of Moodle 2.0 at the University of Bath (due Summer 2011)
- further development of Moodle-SAMIS Integration
- the wider Moodle Community development of future versions of Moodle

## Methodology

The information provided in this report has been collated from responses to the question:

***“What functionality do staff and students require from an online submission system?”***

Participants were asked to consider this in more detail and comment on:

- How do you currently use the Moodle assignment activity?
- What do you think of the functionality it provides?
- What would you like the assignment activity to be able to do?

During Semester Two of 2009-2010 the following fora gave consideration to these questions:

- Staff focus group on online submission of work (10 teaching and support staff)
- Students' Union Academic Councils (over 150 student Academic Representatives)
- Moodle Advisory Group (12 teaching and support staff including the e-Learning team)
- Direct responses from participants in the Moodle Staff Area (5 responses from the 1500 participants on this Moodle unit)

As the sample size of users taking part in these discussions is relatively small the responses cannot be considered representative of all University of Bath Moodle users. However, the information provided may still be helpful as an indicator to guide future development.

The suggested requirements from these various sources were collated, then evaluated by the e-Learning Team and categorised. They are defined in this report as functionality that is either:

- already available
- achievable by a workaround
- to be delivered in the near future (via e-Learning or Moodle developments)
- currently unavailable and not due for implementation

## **Findings**

Overall, participants in the study were satisfied with the provisions the Moodle assignment activity for their current online submission needs. However, the additional functionality that was proposed by the group reflected both an expectation that the uptake of online submission will continue to rise and a recognition of the demands of managing this for large cohorts.

Staff are looking for greater control and flexibility around the creation of assignment activities so that online submission can be more effectively administered with a limited input of staff time. Many of the proposals are to streamline the marking process, whilst suggested improvements to grading and feedback functions might allow online submission to better reflect current offline assessment processes. The need for a holistic view of Moodle and a shift away from a specific unit-based perspective was highlighted as a requirement by both staff and students. A more detailed consideration of all these proposed developments is available in Appendix 1.

Much of the functionality that was suggested by participants is actually already (or soon to be) offered by the Moodle assignment activity. These requirements are detailed in Appendix 2, where they are supplemented with information on their availability. The fact that these aspects of online submission were raised as future requirements has highlighted the need for further clarity about the current potential of the Moodle assignment activity. In light of this, additional support materials on using the Moodle assignment activity have been produced and will be communicated to staff through the Moodle FAQs, e-Learning blogs and Moodle Staff Area.

## **Conclusions and recommendations**

The findings suggest that the Moodle users participating in the study found that the assignment activity is suitable for online submission in their current practice. However, as online submission of student work develops and is adopted more widely across the University, it will be increasingly important for the e-Learning team to:

- Revisit the use of the assignment activity after the implementation of Moodle 2.0 in summer 2011 to assess whether efficiency gains have been made
- Feed any development needs for the assignment activity into the wider Moodle community for it to be included in core code
- Refer to the findings of this report when identifying and prioritising any future Moodle development work
- Further explore approaches to online submission of student work in other HEIs
- Include monitoring usage of the assignment activity as a key performance indicator to inform planning hardware requirements and upgrades
- Incorporate the points raised by participants into our e-learning staff development programme

## Appendix 1: online submission functionality currently not available

The various types of functionality requested here represent significant amounts of development work and would constitute projects in their own right. These projects would involve a move from the core Moodle code and so would have considerable implications for its future maintenance.

Functionality	Notes
<b>1. Greater control and flexibility at the assignment submission point</b>	
1.1 An ability to auto-check or restrict the <b>file types</b> that students can upload (eg .doc .pdf) and prevent submission of files that have incorrect file extension	<ul style="list-style-type: none"> <li>• This could be developed with some effort.</li> <li>• Would it be more effective to provide clear guidance to students and examples of good practice to staff? e.g. report and how-to guide <a href="http://go.bath.ac.uk/siro">http://go.bath.ac.uk/siro</a> and <a href="http://go.bath.ac.uk/ogie">http://go.bath.ac.uk/ogie</a>.</li> </ul>
1.2 <b>Word counts</b> (or page counts) that show in the assignment grading page or an automatic limit to word counts which prevents submissions	<p>This raises issues which cannot be resolved within Moodle:</p> <ul style="list-style-type: none"> <li>• Student self-declared word counts could be inaccurate and would still need to be manually checked.</li> <li>• There would be a difficulty in ascertaining a formal word count rather than actual word count (e.g. not including quotations, references etc).</li> </ul>
1.3 Enable <b>submission of group coursework</b> (with direct access to feedback and grades for all group members)	<ul style="list-style-type: none"> <li>• This functionality may be delivered via the improved Workshop module in Moodle 2.0 – this requires further investigation.</li> <li>• A third party module with this functionality may be available.</li> <li>• If not enabled by the above, this is likely to involve significant development work to provide the functionality.</li> </ul>
1.4 Automated <b>receipt for successful file upload</b> sent to students via a confirmation email	<ul style="list-style-type: none"> <li>• Significant development work would be required to achieve this.</li> </ul>
1.5 Enable <b>simpler creation and administration of groups</b> within Moodle eg upload of tutorial/workshop groups from file or direct creation via SAMIS integration	<ul style="list-style-type: none"> <li>• Currently, groups can be automated (randomly or alphabetically) or can be set up manually. Ideally SAMIS integration would enable group functionality or they could be uploaded via CSV file.</li> <li>• However, CSV uploads involve additional complexity and can be very prone to error.</li> <li>• There may be alternative options through a new 'User API' in Moodle 2.0, which might allow the drawing of group data from another central source outside Moodle. This functionality would require major development of systems/software external to Moodle. There would be a need to map these requirements in advance of the Moodle 2.0-SAMIS integration.</li> </ul>
<b>2. Streamlining marking and improvements to the grading/feedback process</b>	
2.1 Make additional student data visible in the marking screen (and profile) i.e. <b>display student number or candidate number</b> as well as the student name to allow for ease of identification	<ul style="list-style-type: none"> <li>• This is dependent on the student information held in SAMIS.</li> <li>• It may be possible to display this information in the user profile.</li> <li>• This would require significant work related to the SAMIS integration and there is a need to map these requirements in advance of the Moodle 2.0/SAMIS integration.</li> <li>• The Moodle feedback screen may be modifiable (or configurable) to include this information; a move away from core Moodle code.</li> </ul>

2.2 An option to <b>bulk upload feedback, grades and response files</b> from another location/file has been requested in order to speed up the marking process for large cohorts	<ul style="list-style-type: none"> <li>Investigation is ongoing into provision by other HEIs in this respect and how they streamline marking for large cohorts.</li> <li>This would be very difficult to achieve in terms of development.</li> <li>A complex workaround is currently available but will not work in Moodle 2.0 due to changes in the file structure/management.</li> <li>Would this functionality actually speed up marking as the data will still have to be inputted elsewhere - why not directly to Moodle?</li> </ul>
2.3 <b>Tutor privacy</b> when marking preventing visibility of other markers' grades and comments when there are several members of staff marking submissions for the same cohort of students	<ul style="list-style-type: none"> <li>Some departments/faculties have enquired whether it is possible to enable tutor privacy when marking. However, others consider the visibility of the marking process in Moodle to be integral to maintaining standards and supporting staff in their marking.</li> <li>It appears that a change in permissions/role cannot enable this functionality, although this may merit some further investigation.</li> </ul>
2.4 <b>Integration of the Moodle Gradebook with SAMIS:</b> to automate the input of marks to SAMIS, which is currently manual from mark sheets or an export of a CSV file of grades from Moodle	<ul style="list-style-type: none"> <li>Exploratory discussions are taking place with University College London around the potential future development of the Moodle-SAMIS integration. Major development work would be required.</li> <li>A pilot study into use of the Gradebook to discover user stories, functionality and corresponding potential links with SAMIS should be undertaken in advance of any development.</li> </ul>
2.5 <b>Anonymity</b> for students in the marking process (name not visible) and <b>second marking</b> (including <b>blind second marking</b> )	<ul style="list-style-type: none"> <li>Investigation is ongoing into the provision of this functionality by other HEIs through the creation of 3rd party Moodle modules.</li> <li>The implications for Moodle 2.0? Will this modification still work?</li> </ul>
2.6 <b>Moderation</b> – make bulk changes to one tutor's grades and highlight discrepancies between markers	<ul style="list-style-type: none"> <li>This is currently not possible.</li> <li>It is unlikely to be made available due to the significant development it would require.</li> </ul>
2.7 <b>'Marker' role</b> that receives notification of assignment submissions rather than all teachers/non-editing teachers	<ul style="list-style-type: none"> <li>Shifting to the creation and use of Director of Studies and administrator roles with alternative permissions may enable this.</li> <li>This needs to be part of a wider conversation about the use of roles leading up to the implementation of Moodle 2.0.</li> </ul>
<b>3. Wider views of Moodle: shifting away from a unit-based perspective</b>	
3.1 <b>Moodle as portfolio of submission</b> with: <ul style="list-style-type: none"> <li>Individual student view</li> <li>Director of Studies view</li> <li>External Examiner view</li> </ul>	<ul style="list-style-type: none"> <li>Integration of Moodle with Mahara e-portfolio software (currently a pilot project) should allow students to 'push' assignments from all units to an individual e-portfolio (investigation is required to ascertain if this includes grades/feedback/response files).</li> <li>It may be possible to develop a 'dashboard' (external to Moodle) containing information that offers a wider, whole-student view. This would be a major development project.</li> </ul>
3.2 <b>Student view</b> of Moodle spanning multiple units across their programme of study and years of study (including access to previous grades, assignments and content)	<ul style="list-style-type: none"> <li>This is partly achieved through My Moodle: which gives students a central list of assignments that are due, late, submitted, reviewed and graded (for currently live/available units), but which doesn't include grades, feedback or response files. Very little information is provided to tutors in their equivalent My Moodle view, only due dates for relevant units.</li> <li>As before, it may be possible to develop a 'dashboard' containing information that offers this wider, whole-student or whole-unit (programme) view.</li> <li>Guidance is required on making completed units (including content, submitted work and grades) available view-only to students and on managing earlier versions of units.</li> </ul>

## APPENDIX 2: online submission functionality that is already available, has a workaround or is due for implementation in Moodle 2.0 (Summer 2011) or other eLearning development projects

An ability to upload files containing computer code	<b>Workaround:</b> To zip the file containing the code before uploading it to Moodle (see the first section of FAQ: <a href="http://go.bath.ac.uk/8esu">http://go.bath.ac.uk/8esu</a> ).
Thesis version tracking – to track ongoing drafts from students and feedback from tutors	<b>Solution:</b> Use <i>advanced upload of files</i> as your assignment activity choice. This enables the tutor to upload response files and students to upload multiple files to track drafts/feedback. For further guidance on setting up assignments: <a href="http://go.bath.ac.uk/iefh">http://go.bath.ac.uk/iefh</a>
Provision of alternative deadlines for individuals/groups with extensions	<b>Workaround:</b> Do not prevent late submissions but run a soft deadline instead. For further guidance on setting up assignments see: <a href="http://go.bath.ac.uk/iefh">http://go.bath.ac.uk/iefh</a>
Plagiarism signature or signoff at the point where work is submitted online	<b>Workaround:</b> Mimic a conditional activity. Set up a quiz with a yes/no answer to a plagiarism declaration, where 'yes' is set as the correct answer and feedback opens up assignment submission point (see the how-to guide at: <a href="http://go.bath.ac.uk/vn94">http://go.bath.ac.uk/vn94</a> ). <b>Upcoming!</b> The ability to create conditional activities will be available in Moodle 2.0
Automatic submission of files to Turnitin plagiarism-checking software	<b>Upcoming!</b> Turnitin is currently running as a pilot and will be available campus-wide from the start of 2010-2011. Automatic submission of work to Turnitin can be set up from within the Assignment Activity in Moodle and similarity scores viewed from within the Moodle feedback/grading screen.
Bulk download of files submitted by students	<b>Workaround:</b> to install the Firefox Add-on DownThemAll (for more details see the Moodle FAQ at: <a href="http://go.bath.ac.uk/9x0p">http://go.bath.ac.uk/9x0p</a> ) <b>Upcoming!</b> There will be the functionality to download all assignments in one go from a submission point at the click of a button in Moodle 2.0
Bulk upload of feedback and grades by tutors	<b>Workaround:</b> There is a complex workaround available in the current version of Moodle (more details are available here: <a href="http://go.bath.ac.uk/gews">http://go.bath.ac.uk/gews</a> )
Side-by-side marking screens	<b>Solution:</b> In Windows - right click on the grey menu bar at the bottom of screen and 'Tile Windows' horizontally or vertically (you need to minimise windows that you don't need!).
Workflow tracking –electronic signoff process that shows completion of assignment submission and marking	<b>Coming soon!</b> The workshop tool (which has been much improved in Moodle 2.0) may provide functionality similar to a workflow process. This will require further investigation.
Annotation of PDF files	<b>Solution:</b> This can be achieved through the purchase and installation of additional software ( <a href="http://www.adobe.com/products/acrobat">Adobe Acrobat: http://www.adobe.com/products/acrobat</a> )

An ability to export the Moodle Gradebook in a SAMIS-ready format	<b>Solution:</b> As the Moodle Gradebook is highly customisable, it can be set up to reflect SAMIS assessment data. This information can then be exported in Excel (and other) formats. See the Gradebook FAQs ( <a href="http://go.bath.ac.uk/0b02">http://go.bath.ac.uk/0b02</a> ) and How to guide () for further guidance.
An improved feedback/grading window with spell checker and a larger text box for typing comments	<b>Workaround: for spell-check</b> - use Firefox as your web browser and install the British English Dictionary add-on ( <a href="http://go.bath.ac.uk/4x23">http://go.bath.ac.uk/4x23</a> ). <b>Coming soon!</b> The text editor in Moodle 2.0 will have spell-check functionality. <b>Workaround: for edit box size</b> – using Google Chrome as your browser will allow you to resize text boxes (but you will lose your html formatting options e.g. bold, font size etc) <b>Coming soon!</b> The text box can be resized in Moodle 2.0
For moderation purposes - highlight fails and distinctions	<b>Solution:</b> Fails and passes can be highlighted in the Gradebook with green/red shading (see FAQ: <a href="http://go.bath.ac.uk/7gwi">http://go.bath.ac.uk/7gwi</a> ). The Gradebook can be sorted ascending or descending by grade which will move students with the highest/lowest marks to the top of the list see FAQ: <a href="http://go.bath.ac.uk/s0u9">http://go.bath.ac.uk/s0u9</a> )
Enable external examiner access to specific units	<b>Solution:</b> This is available through a BUCS Lite (WAAA) account (see FAQ: <a href="http://go.bath.ac.uk/2qwn">http://go.bath.ac.uk/2qwn</a> ).
Archiving – general staff access to previous units and assignment submissions	<b>Coming soon!</b> A new archive and restore policy will be published during Summer 2010. In the future, staff will be provided access to a view-only archive of Moodle - a snapshot of all courses, content and files taken at the end of July each year.
Archiving - student access to previous grades, assignments and content	<b>Solution:</b> It is possible to make previous units view-only for students (including course materials, assignments and grades/feedback). See FAQ: <a href="http://go.bath.ac.uk/u5ir">http://go.bath.ac.uk/u5ir</a> .
View assignment deadlines across a programme of study	<b>Solution:</b> Use My Moodle (see FAQ: <a href="http://go.bath.ac.uk/aazv">http://go.bath.ac.uk/aazv</a> ) and add the calendar block to see all deadlines for courses you are enrolled on as a student or teacher.
Deal with courses that span more than one year	<b>Solution:</b> Using groups/groupings to assign specific activities to groups of students could offer a means of delivering courses in this way (see FAQs: <a href="http://go.bath.ac.uk/kzmf">http://go.bath.ac.uk/kzmf</a> ). <b>Coming soon:</b> New functionality in Moodle 2.0 (completion tracking and conditional activities) could open up alternative options for dealing with complex cohorts.
Coursework status updates for students	<b>Solution:</b> This can be achieved with My Moodle (see FAQ: <a href="http://go.bath.ac.uk/aazv">http://go.bath.ac.uk/aazv</a> ) which displays a student's assignments in a list of all their units (and categorised as due, late, submitted, reviewed or graded). Students then can click on the assignment to view their grade/feedback.
Overview of assignment submission dates across a programme of study.	<b>Solution:</b> This can be achieved with My Moodle (see FAQ: <a href="http://go.bath.ac.uk/aazv">http://go.bath.ac.uk/aazv</a> ). Staff can add the calendar block to their My Moodle page which will show all events (including assignment activity deadlines) across every unit they are enrolled on.